

Comprehensive Technical Exhibit
Application for License
K280FK - Hays, Kansas
Community Broadcasting, Inc.
October, 2011

Application for License

The following engineering statement and attached exhibits have been prepared for **Community Broadcasting, Inc.** ("CBI"), and are in support of their Application for License to cover changes authorized to FM translator station K280FK at Hays, Kansas.¹ Under BPFT-20100407AAQ, CBI proposed a change in the channel of operation from 227 to 280. This was a proposed change in the intermediate frequency spacing.

As discussed in the application for construction permit, the requested channel change was proposed to eliminate interference with first-adjacent station KKDT at Burdett, Kansas. The authorized change in the channel of operation for K280FK has been completed.

The construction permit as issued by the Commission lists two special conditions or restrictions. Both of these conditions will be appropriately discussed.

The first special condition or restriction pertains to RF safety for personnel at the site. CBI certifies that it will coordinate with all other present and future users of the site to ensure that workers having access to the site and/or tower are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power and/or cessation of operation.

The second special condition or restriction pertains to program tests. Under this condition, CBI is required to have this license application on file prior to the commencement of program tests.

¹ The Facility ID for K280FK at Hays, Kansas is 139529. The former callsign for K280FK was K227AS.

The equipment tests are completed. Program test authorization will commence upon the submission of this license application.

The specified transmitter power output achieves the authorized effective radiated power. The authorized ERP is 205 Watts. The antenna used by the facility is a Shively Labs model 6812-3 with 3 bays spaced one wavelength apart. The data from the manufacturer lists 1.52 as the numerical gain for the antenna. To achieve the authorized effective radiated power an antenna input power of 187.2 Watts is required.

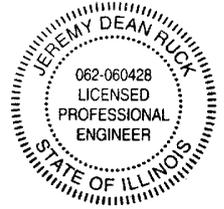
Ahead of the antenna is the main transmission line, which consists of 206.6 feet of Andrew LDF4-50A semi-flexible foam dielectric coaxial cable.² Data from the manufacturer lists 0.7203 as the decimal efficiency for this run of transmission line. The input power to the line necessary to achieve the authorized ERP is 187.2 Watts.

Ahead of the transmission line is a Polyphaser lightning protection device. This component has an insertion loss of 0.1 dB, which translates into a gain of 0.9772. In order to achieve the authorized effective radiated power and input power of 191.6 Watts into the Polyphaser is required.

The final component in the transmission system is a superflexible jumper, which has a decimal efficiency of 0.9850. The necessary input power to this jumper, which is connected to the output of the transmitter, is 194.5 Watts. This value rounds to 195 Watts, which is the specified transmitter power output. Thus, the specified transmitter power output does achieve the authorized effective radiated power.

² The transmission line has a nominal diameter of 1/2".

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2013

Jeremy D. Ruck, PE
October 11, 2011